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EXAMINER	
RASHID, DAVID	
ART UNIT	PAPER NUMBER
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/808,194	CHELLAPILLA ET AL.	
	Examiner	Art Unit	
	David P. Rashid	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/28/2004, 7/2/2004, 2/6/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

1. This office action is responsive to the preliminary claim and specification amendment received on December 13, 2004.

Drawings

2. The following is a quote from 37 CFR 1.84(p)(3):

> When necessary, such as indicating a surface or cross section, a reference character may be underlined and a blank space may be left in the hatching or shading where the character occurs so that is appears distinct.

3. FIG. 1 is objected to under 37 CFR 1.84(p)(3) for failing to properly underline where needed and it is suggested to properly underline reference numerals 131 and 134.

4. The following is a quote from 37 CFR 1.84(q):

> *Arrows.* Arrows may be used at the ends of lines, provided that their meaning is clear, as follows:
> (1) On a lead line, a freestanding arrow to indicate the entire section towards which it points;
> (2) On a lead line, an arrow touching a line to indicate the surface shown by the line looking along the direction of the arrow; or
> (3) To show the direction of movement.

5. FIG. 1 is objected to under 37 CFR 1.84(q) for failing to properly use arrows when indicating an entire section and it is suggested to make reference numeral 100 an arrow.

6. The following is a quote from 37 CFR 1.84(l):

> Every line, number, and letter must be durable, clean , black (except for color drawings), sufficiently dense and dark, and uniformly thick and well-defined.

7. FIG. 17 is objected to under 37 CFR 1.84(l) for failing to make all lines black and it is suggested to fill in all arrows in FIG. 17 so that they are uniformly black (in particular reference numeral 1500).

8. The following is a quote from 37 CFR 1.84(q):

> Lead lines are those lines between the reference characters and the details referred to. Such lines may be straight or curved and should be as short as possible. They must originate in the immediate proximity of the reference character and extend to the feature indicated.

9. FIG. 6 is objected to under 37 CFR 1.84(q) for failing to extend to the feature indicated and it is suggest to fully extend reference numeral 604 to the (i,j) axis.

10. The drawings are objected to under 37 CFR 1.83(a) because they fail to show subject matter as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). It is suggest to include variable "theta" in FIG. 6 and FIG. 7.

11. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference numeral "210" and "300" have both been used to designate the digital image data inputted into the object detection and extraction system 202 in the image processing system 200

– it is suggested to change one reference numeral to be the other within the drawings and specification.

12. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

13. The abstract of the disclosure is objected to under 37 CFR 1.72(b) because the abstract may not include other parts of the application or other material. The disclosed abstract also contains the title of the invention and must be deleted from the abstract page. Correction is required. See MPEP § 608.01(b).

14. The disclosure is objected to because of the following informalities:

(i) page 22, line 26 recites "...a data pixel detection module 300..." but it has been determined that element 300 is an object pixel detection module, and every object as disclosed is

data but not all data disclosed is an object – suggest changing to "...an object pixel detection module 300...".

(ii) page 27, line 21 – 22 recites "If one of the sub-images being processed has no disparities present..." wherein the drawing discloses element 504 by questioning "are disparities present?" which indicates whether or not any disparities are present in either of the data sets. It is possible to have one of the sub-images having no disparities present while the other sub-image having disparities, which would give two different results from the drawing and specification – suggest changing either the specification or drawing to be consistent with each other.

(iii) page 31, line 6 refers to the wrong reference numeral – suggest changing to "...in the scanned image 602...".

(iv) page 31, line 18 – 19 refers to the wrong reference numerals – suggest changing to "...identical trapezoidal shapes 720 and 730.".

Appropriate correction is required.

Claim Objections

15. 37 CFR 1.75(a) reads as follows:

> The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

16. **Claims 39** and **42** are objected to because of the following informalities:

(i) Claim 39, line 4 recites "...on the status level indicator..." wherein the claim from which it depends does not have a status level indicator (claim 37) to further limit,

however claim 38 does – suggest depending from claim 38 instead of claim 39 by changing to "The system of claim 38 wherein..."

(ii) Claim 42 is unclear when depending from claim 40 since 42 recites a "method" and claim 40 is a "system" – suggest depending from claim 41 instead of claim 40 by changing to "The method of claim 41 wherein..."

Appropriate correction is required.

Claim Rejections - 35 USC § 101

17. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.
>
> Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.
>
> ... a signal does not fall within one of the four statutory classes of Sec. 101.
>
> ... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

18. **Claims 17 through 29** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 17 through 29 are drawn to functional descriptive material recorded on a "...computer-readable medium comprising computer-executable instructions that, when executed by a computer, performs a method...", claim 17, line 1. Normally, the claim would be statutory. However, the specification, at page 21 defines the claimed computer readable medium as encompassing statutory media such as "computer storage media" and "communication media" as well as ***non-statutory*** subject mater such as "...data in a modulated data signal such as a carrier WAV..." when naming some possible "communication media" encompassed in the "computer readable medium".

A "signal" embodying functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to *include* the disclosed tangible computer readable media, while at the same time *excluding* the intangible media such as signals, carrier waves, etc. Any amendment to the claim should be commensurate with its corresponding disclosure.

It is suggested to completely remove all intangible media such as signals, carrier waves, etc.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40, and **41** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination between NewSoft (*NewSoft Presto! Bizcard User's Guide*, NewSoft Technology Corp., 2001) and Zhou (US 6,898,316 B2).

Regarding **claim 1**, while NewSoft discloses a computer-implemented method for populating an electronic form from an electronic image ("Simply scan your business cards and Presto! BizCard automatically saves the data and image for each card. Different viewing modes are available for easy searching, editing, creating, and sorting.", page 1), the method comprising:

(b) identifying information elements from pixels within the electronic image that correspond to the first object ("Presto! BizCard keeps track of names, companies, mailing addresses, phone/fax numbers, e-mail addresses, and more. Simply scan your business cards and Presto! BizCard automatically saves the data and image for each card.", page 1 wherein the information elements are the names, companies, mailing addresses, phone/fax numbers, e-mail addresses, etc and the first object are the business cards being scanned.);

(c) displaying fields of the electronic form and the identified information elements to a user through a graphical user interface ("The Workspace", page 7, "Card Deck Mode", page 10);

(d) parsing the information elements into tagged groups of different information types ("Presto! BizCard keeps track of names, companies, mailing addresses, phone/fax numbers, e-mail addresses, and more. Simply scan your business cards and Presto! BizCard automatically saves the data and image for each card.", page 1 wherein the parsing of the information elements into tagged groups of different information types are the names, companies, mailing addresses, phone/fax numbers, e-mail addresses, etc.); and

(e) populating the fields of the electronic form with the tagged groups to produce a populated form and allowing the user to edit the populated fields through the graphical user interface ("Card Editor Mode", page 24), NewSoft does not teach (a) identifying a size, orientation and position of a first object having any arbitrary orientation within the electronic image;

Zhou discloses a multiple image area detection in a digital image ("The invention relates to image processing, and more particularly to a method for detecting multiple image areas in a digital image.", column 2, line 8) that teaches identifying a size, orientation and position of a first object having any arbitrary orientation within the electronic image ("FIG. 1 is an exemplary scanned digital image including multiple image areas.", column 2, line 36. The size, orientation, and position of the first object (the business card or photo as shown in FIG. 1) are done through the stroke detection, stroke merge ("Specifically, two strokes are merged when they are collinear and the start point of one is near the end point of another", column 6, line 47), corner detection ("The absolute value of the cosine of the angle between strokes PS1 and PS2 is compared with an angle threshold value to determine if the two strokes are perpendicular.", column 18, line 66), and rectangle detection ("Using these guidelines, a set of corner configurations can be defined to

cover all possible positions of corners for the formation of image area rectangles.", column 21, line 54) steps as shown in FIG. 3.).

It would have been obvious to one or ordinary skill in the art to disclose identifying a size, orientation and position of a first object having any arbitrary orientation within the electronic image as taught by Zhou to "...detect an image area in a digital image...", Zhou, column 1, line 58.

Regarding **claim 2**, while the combination between NewSoft and Zhou disclose the method of claim 1, the combination does not teach wherein (a) identifying a size, orientation and position of the first object among a plurality of objects within the electronic image.

Zhou discloses a multiple image area detection in a digital image ("The invention relates to image processing, and more particularly to a method for detecting multiple image areas in a digital image.", column 2, line 8) that teaches (a) identifying a size, orientation and position of the first object among a plurality of objects within the electronic image ("FIG. 1 is an exemplary scanned digital image including multiple image areas. Referring to FIG. 1, digital image 10 is generated in one scan job by placing various image objects (photographs and a business card) on a scanner.", column 5, line 18).

It would have been obvious to one or ordinary skill in the art to disclose (a) identifying a size, orientation and position of the first object among a plurality of objects within the electronic image as taught by Zhou to "...detect an image area in a digital image...", Zhou, column 1, line 58.

Regarding **claim 3**, while the combination between NewSoft and Zhou disclose the method of claim 1, the combination does not teach wherein (a) comprises: classifying each pixel within the image to produce pixel classification data; defining an image function to process the pixel classification data; dividing the image into sub-images based on disparities in the image function; and processing the sub-images to determine a size, an orientation and a position for each of the objects, including the first object.

Zhou discloses a multiple image area detection in a digital image ("The invention relates to image processing, and more particularly to a method for detecting multiple image areas in a digital image.", column 2, line 8) that teaches (a) classifying each pixel within the image to produce pixel classification data ("FIG. 6 is a flowchart illustrating the region segmentation process of the image area detection method according to one embodiment of the present invention.", column 7, line 45. FIG. 6 is a loop process from which every pixel of the image is selected and compared to a threshold to classify as either white (background) or black (foreground, possible image).);

defining an image function to process the pixel classification data (FIG. 6 illustrates the region segmentation process wherein the image function to process the pixel classification data is the region segmentation process as disclosed in FIG. 6);

dividing the image into sub-images based on disparities in the image function ("FIG. 7 illustrates the gray-scale image file 134 generated as a result of the operation of the region segmentation step on resized image 132. Referring to FIG. 7, white area in gray-scale image file 134 represents potential background area in digital image 10 while black area in gray-sacle

image file 134 represents potential image areas.", column 8, line 45 wherein the sub-images are the separate potential image areas as disclosed.); and

processing the sub-images to determine a size, an orientation and a position for each of the objects, including the first object ("The invention relates to image processing, and more particularly to a method for detecting multiple image areas in a digital image.", column 2, line 8) that teaches identifying a size, orientation and position of a first object having any arbitrary orientation within the electronic image ("FIG. 1 is an exemplary scanned digital image including multiple image areas.", column 2, line 36. The size, orientation, and position of the first object (the business card or photo as shown in FIG. 1) are done through the stroke detection, stroke merge ("Specifically, two strokes are merged when they are collinear and the start point of one is near the end point of another", column 6, line 47), corner detection ("The absolute value of the cosine of the angle between strokes PS1 and PS2 is compared with an angle threshold value to determine if the two strokes are perpendicular.", column 18, line 66), and rectangle detection ("Using these guidelines, a set of corner configurations can be defined to cover all possible positions of corners for the formation of image area rectangles.", column 21, line 54) steps as shown in FIG. 3.).

It would have been obvious to one of ordinary skill in the art to disclose (a) classifying each pixel within the image to produce pixel classification data;

defining an image function to process the pixel classification data as taught by Zhou for "...identifying in the digital image a first image region indicative of the background area and a second image region indicative of the image area...", Zhou, column 1, line 61.;

dividing the image into sub-images based on disparities in the image function as taught by Zhou because "...a user may scan multiple photographs at each scan job and use the image area detection method of the present invention to automatically detect and extract the individual photographs.", Zhou, column 5, line 11; and

processing the sub-images to determine a size, an orientation and a position for each of the objects, including the first object as taught by Zhou to "...detect an image area in a digital image...", Zhou, column 1, line 58

Regarding **claim 4**, while the combination between NewSoft and Zhou disclose the method of claim 3, the combination does not further comprise repeating the classifying pixels, defining an image function, and dividing of the image until the image contains a single object OR the image can no longer be divided.

Zhou discloses a multiple image area detection in a digital image ("The invention relates to image processing, and more particularly to a method for detecting multiple image areas in a digital image.", column 2, line 8) that teaches repeating the classifying pixels (The loop given in FIG. 6 from the first pixel to the last pixel in the image.), defining an image function (FIG. 6 illustrates the region segmentation process wherein the image function to process the pixel classification data is the region segmentation process as disclosed in FIG. 6), and dividing of the image until the image contains a single object OR the image can no longer be divided (The image is divided until the image can no longer be divided when a pixel-by-pixel region segmentation process of FIG. 6 is performed. The image is divided until it can no longer be divided by performing on every pixel.).

It would have been obvious to one of ordinary skill in the art to disclose repeating the classifying pixels, defining an image function, and dividing of the image until the image contains a single object OR the image can no longer be divided as taught by Zhou to incorporate and apply every pixel into the region segmentation algorithm.

Regarding **claim 5**, while the combination between NewSoft and Zhou disclose the method of claim 3, the combination does not teach 3 wherein classifying comprises classifying each pixel as one of a data pixel or a background pixel.

Zhou discloses a multiple image area detection in a digital image ("The invention relates to image processing, and more particularly to a method for detecting multiple image areas in a digital image.", column 2, line 8) that teaches classifying each pixel as one of a data pixel or a background pixel (refer to references cited in claim 3).

It would have been obvious to one of ordinary skill in the art to disclose classifying each pixel as one of a data pixel or a background pixel as taught by Zhou for "...identifying in the digital image a first image region indicative of the background area and a second image region indicative of the image area...", Zhou, column 1, line 61.

Regarding **claim 7**, NewSoft discloses wherein:

(b) comprises identifying text blocks and two-dimensional locations of the text blocks within the first object using optical character recognition ("Scanners have two main,parameters that influence the quality of the OCR results.", page 53 implying the results from the NewSoft

program were given using OCR technology. It is inherent that OCR identifies two-dimensional locations of text blocks to one of ordinary skill in the art.); and

(c) comprises displaying the identified text blocks to the user through the graphical user interface simultaneously with the fields of the electronic form ("Card Deck Mode", page 10 is one of the modes that displays the identified text blocks (right side columns) to the user through the graphical user interface simultaneously with the fields of the electronic form (fields are listed at the top of the right side column as disclosed, some of which consist Name, Company, etc).).

Regarding **claim 8**, NewSoft discloses wherein:

(c) comprises displaying the identified information elements within an image of the first object to the user through the graphical user interface (refer to references cited in claim 1 and 7); and

(d) comprises highlighting the tagged groups of different information types within the image of the first object with visual indicators that indicate the different information types ("Edit Template Dialog Box", page 41 as disclosed by NewSoft allows the tagged groups of different information types within the image of the first object to be displayed with visual indicators that indicate the different information types. As shown, each tagged group of different information types (name, title, company, etc) is highlighted so that when the respective business card is displayed (image of the first object), each scanned and recognized tagged group will be put into that particular template format.).

Regarding **claim 9**, NewSoft discloses wherein:

(d) comprises receiving the information elements as untagged media from an untagged media store, and parsing the untagged media to identify information types of the information elements ("The first time you run the program, an empty database file (Untitled.mdb) will be opened.", page 7 wherein the empty database file is considered untagged media from an untagged media store. "Scan business cards to automatically build and maintain a database of all your business contacts.", page 2 discloses where the business card has been scanned and the untagged media mentioned is parsed to identify information types of the information elements as shown in "The Workspace", page 7.);

(e) comprises automatically populating at least one of the fields with at least one of the information elements based on the information type of that element ("Scan business cards to automatically build and maintain a database of all your business contacts.", page 2); and

(c) comprises displaying the information elements through an object data graphical user interface and displaying the populated fields and any unpopulated fields through a form graphical user interface ("The Workspace", page 7).

Regarding **claim 10**, NewSoft discloses wherein: (c) further comprises employing visual indicator in the object data graphical user interface to indicate that an information element is compatible with a particular field in the form ("The Workspace", page 7, "Card Deck Mode", page 10 both show the respective fields populated when the scanner and software have recognized a particular field. The population of the field itself constitutes an indicator in the object data graphical user interface to indicate that the information element itself is compatible

with a particular field in the form.).

Regarding **claim 11**, NewSoft discloses wherein (c) further comprises indicating a status level associated with at least one information element in at least one populated field in the form ("The Workspace", page 7, "Card Deck Mode", page 10 both show the respective fields populated when the scanner and software have recognized a particular field. The population of the field itself constitutes an indicator in the object data graphical user interface to indicate that the information element itself is compatible with a particular field in the form. The population of the field itself constitutes an indicator as mentioned above, as well a status level. If the field had been populated, the status would be that the program and scanner attempted to fill in the field from the scanned business card whether correct or not. An empty field would indicate the status that the program and scanner either did not recognize anything on the scanned business card for that particular field, or possibly an error.).

Regarding **claim 12**, NewSoft discloses wherein (c) further comprises prompting the user to verify and/or correct the at least one information element in the at least one populated field based on the indicated status level ("Since the layouts of business cards vary tremendously, the BizCard software might not be able to correctly identify the information on all cards. For instance, the number 5 might be mistaken for the letter S if the type is not very clear or the card is damaged or dirty. If this happens, go to the Card Editor and correct any misread words or characters.", page 22).

Regarding **claim 13**, NewSoft discloses wherein (d) comprises updating other fields of the populated form based on the user verification and/or correction of the at least one information element (refer to references cited in claim 12 wherein the information can be any of the fields of the populated form).

Regarding **claim 14**, NewSoft discloses further comprising:

(f) writing side information gleaned from edits made to any of the populated fields to a side information store ("Sometimes, data in separate programs may be identical but labeled differently. If you should find it necessary to change the way the data is transferred, click the Field Name Mapping button.", page 34 in combination with "The fields on the left side are the BizCard fields, and on the right are the fields for the program or device you want to synchronize with. If you want to change any field, click the item in the right-hand column adjacent to the BizCard field for which you want to send or receive data. A list will appear. Choose the field to map to by clicking its name. Data for a field that is not mapped will not be transferred.", page 35 wherein the side information is the low-level programming Bizcard uses to store the information from the Field Mapping edit window on page 35.); and

(g) re-parsing the information elements into tagged groups of different information types in (d) and re-populating at least one other field in (e) based on the side information ("After setting your Synchronize Options, you can start to Export, Import, or Synchronize your contact information.", page 36. The option of synchronizing will re-parse the information elements into tagged groups of different information types in (d) and re-populate as least one other field in (e)

based on the side information to the device/software ready to be synchronized with (Palm Computing Platform, Outlook Express, etc).).

Regarding **claim 15**, NewSoft discloses wherein the electronic image comprises a plurality of objects and the method further comprises: (f) performing (a) through (e) for each object, such that, for each object, fields of a corresponding electronic form are at least partially populated with information elements obtained from pixels within that object ("Multiple cards in one scan. If you are using a flatbed scanner and want to scan more than one business card at a time, selecting this option will let Presto! BizCard perform the multiple-card boundary analysis. Clear this option if you want to scan each card separately.", page 16 in combination with "After the scan is finished, the program will perform the recognition and return to the screen at which you began the scan with the new cards included. Compare the information from the cards and edit as needed.", page 22).

Regarding **claim 16**, NewSoft discloses the method of claim 15 wherein the plurality of objects comprises objects of different types (It is inherent that every business card is unique, constituting any two business cards are "different types". Since NewSoft can scan multiple business cards on the flatbed, a plurality of objects (business cards) comprises objects of different types.).

Regarding **claim 17**, claim 1 recites identical features as in claim 17 wherein the method is a computer-readable medium comprising computer-executable instructions that, when

executed by a computer, performs the method ("System Requirements", NewSoft, page 3 and the installation procedure of the software starting on page 4). Thus, arguments equivalent to those presented above for claim 1 is equally applicable to claim 17.

Regarding **claim 18**, claim 15 recites identical features as in claim 18. Thus, arguments equivalent to those presented above for claim 15 is equally applicable to claim 18.

Regarding **claim 19**, claim 16 recites identical features as in claim 19. Thus, arguments equivalent to those presented above for claim 16 is equally applicable to claim 19.

Regarding **claim 20**, claim 3 recites identical features as in claim 20. Thus, arguments equivalent to those presented above for claim 3 is equally applicable to claim 20.

Regarding **claim 21**, claim 5 recites identical features as in claim 21. Thus, arguments equivalent to those presented above for claim 5 is equally applicable to claim 21.

Regarding **claim 23**, claims 7 and 8 recite identical features as in claim 23. Thus, arguments equivalent to those presented above for claims 7 and 8 are equally applicable to claim 23.

Regarding **claim 24**, claim 9 recites identical features as in claim 24. Thus, arguments equivalent to those presented above for claim 7 is equally applicable to claim 24.

Regarding **claim 25**, claim 10 recites identical features as in claim 25. Thus, arguments equivalent to those presented above for claim 10 is equally applicable to claim 25.

Regarding **claim 26**, claim 11 recites identical features as in claim 26. Thus, arguments equivalent to those presented above for claim 11 is equally applicable to claim 26.

Regarding **claim 27**, claim 12 recites identical features as in claim 27. Thus, arguments equivalent to those presented above for claim 12 is equally applicable to claim 27.

Regarding **claim 28**, claim 13 recites identical features as in claim 28. Thus, arguments equivalent to those presented above for claim 13 is equally applicable to claim 28.

Regarding **claim 29**, claim 14 recites identical features as in claim 29. Thus, arguments equivalent to those presented above for claim 14 is equally applicable to claim 29.

Regarding **claim 30**, claims 1 and 7 recite identical features as in claim 30. Thus, arguments equivalent to those presented above for claims 1 and 7 are equally applicable to claim 30.

Regarding **claim 31**, claim 1 recites identical features as in claim 31. Thus, arguments equivalent to those presented above for claim 1 is equally applicable to claim 31.

Regarding **claim 32**, claim 3 recites identical features as in claim 32. Thus, arguments equivalent to those presented above for claim 3 is equally applicable to claim 32.

Regarding **claim 33**, claim 5 recites identical features as in claim 33. Thus, arguments equivalent to those presented above for claim 5 is equally applicable to claim 33.

Regarding **claim 35**, claims 7 and 8 recite identical features as in claim 35. Thus, arguments equivalent to those presented above for claims 7 and 8 are equally applicable to claim 30.

Regarding **claim 36**, claim 9 recites identical features as in claim 36. Thus, arguments equivalent to those presented above for claim 9 is equally applicable to claim 36.

Regarding **claim 37**, claim 10 recites identical features as in claim 37. Thus, arguments equivalent to those presented above for claim 10 is equally applicable to claim 37.

Regarding **claim 38**, claim 11 recites identical features as in claim 38. Thus, arguments equivalent to those presented above for claim 11 is equally applicable to claim 38.

Regarding **claim 39**, claim 12 recites identical features as in claim 39. Thus, arguments equivalent to those presented above for claim 12 is equally applicable to claim 39.

Regarding **claim 40**, NewSoft discloses wherein the parsing module comprises means for updating other fields of the populated form according to edits made by the user to the populated fields and the unpopulated fields ("In Card Editor mode, you can add or modify entries. Click on any field to edit.", page 11 wherein the Card Editor mode contains all possible fields from the business card, some blank, others populated to be saved "Use this option to duplicate your card file with a different name. Choose Save As from the file menu, select a location, and type in a file name. Click Save.", page 47.).

Regarding **claim 41**, NewSoft discloses a method for populating electronic forms from an electronic image having first and second objects of different information types ("Simply scan your business cards and Presto! BizCard automatically saves the data and image for each card. Different viewing modes are available for easy searching, editing, creating, and sorting.", page 1), the method comprising:

performing optical character recognition on each sub-image to identify untagged information elements within the corresponding object (refer to references cited in claim 7);

for each sub-image, parsing the untagged information elements into tagged information elements (refer to references cited in claim 1);

populating fields in a first electronic form type with the tagged information elements identified from the sub-image of the first object to produce a first populated form (refer to references cited in claim 1 wherein the first electronic form is the "Card Deck mode", page 10);

populating fields in a second electronic form type with the tagged information elements identified from the sub-image of the second object to produce a second populated form (refer to references cited in claim 1 wherein the second electronic form is the "Card List mode", page 12); and

displaying the first and second populated forms and the untagged information elements to a user through a graphical user interface and allowing the user to edit the first and second populated forms through the graphical user interface (Refer to references cited in claim 1 wherein the "Card Editor mode", page 11 allows the user to add and modify entries that will be later reflected in the first and second populated forms.), however NewSoft does not teach identifying a size, orientation and position of the first and second objects within the electronic image and dividing the electronic image into sub-images corresponding to pixels in the electronic image associated with the size, orientation and position of each object.

Zhou discloses a multiple image area detection in a digital image ("The invention relates to image processing, and more particularly to a method for detecting multiple image areas in a digital image.", column 2, line 8) that teaches identifying a size, orientation and position of the first and second objects within the electronic image and dividing the electronic image into sub-images corresponding to pixels in the electronic image associated with the size, orientation and

position of each object ("FIG. 1 is an exemplary scanned digital image including multiple image areas.", column 2, line 36. The size, orientation, and position of the first object (the business card or photo as shown in FIG. 1) are done through the stroke detection, stroke merge ("Specifically, two strokes are merged when they are collinear and the start point of one is near the end point of another", column 6, line 47), corner detection ("The absolute value of the cosine of the angle between strokes PS1 and PS2 is compared with an angle threshold value to determine if the two strokes are perpendicular.", column 18, line 66), and rectangle detection ("Using these guidelines, a set of corner configurations can be defined to cover all possible positions of corners for the formation of image area rectangles.", column 21, line 54) steps as shown in FIG. 3.).

It would have been obvious to one or ordinary skill in the art to disclose identifying a size, orientation and position of a first object having any arbitrary orientation within the electronic image as taught by Zhou to "...detect an image area in a digital image...", Zhou, column 1, line 58.

20. **Claims 6, 22** and **34** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination between NewSoft (NewSoft Presto! Bizcard User's Guide, NewSoft Technology Corp., 2001) and Zhou (US 6,898,316 B2), in further view of Huaug (US 7,103,198 B2)

Regarding **claim 6**, while the combination between NewSoft and Zhou disclose the method of claim 5, the combination does not teach further comprising: defining the image function as a sum of data pixels in a certain direction; calculating the image function in a first

direction to generate a first data set; calculating the image function in a second direction to generate a second data set; and searching for disparities in the image function in the first direction and the image function in the second direction.

Huaug discloses a method for determining adjacency relation ("The invention relates to a method for determining an adjacency relation and, more particularly, to a method for determining an adjacency relation between a target data block and a comparison data block selected from data blocks of a business card.", column 1, line 8) comprising:

defining the image function as a sum of data pixels in a certain direction (The image function is disclosed in FIG. 2A for determining the vertical projection, horizontal projection, and coordinate position of the data block (In the case of NewSoft and Zhou combination, the data block would be a business card. The sum of data pixels in a certain direction can be shown from the vertical projection. A bold line on the x-axis indicates a sum of greater than 0 from the respective vertical line at that particular point on the x-axis. No bold line on the x-axis indicates a sum of 0 from the respective vertical line at that point on the x-axis.);

calculating the image function in a first direction to generate a first data set (A first data set is the x-axis and result of the vertical projection as disclosed in the "Projection" embodiment of the invention as disclosed in FIG. 2A.);

calculating the image function in a second direction to generate a second data set (A first data set is the y-axis and result of the horizontal projection as disclosed in the "Projection" embodiment of the invention as disclosed in FIG. 2A.); and

searching for disparities in the image function in the first direction and the image function in the second direction (The searching for disparities in the image function for the first direction

and second direction is the search for topological overlaps as shown in FIG. 2C and FIG. 2D. "Overlapped: if the vertical/horizontal projections of two data blocks contain an intersection, the two data blocks are vertically/horizontally overlapped. As shown in FIG. 2c, the data block A (201) is vertically overlapped with a data block D (204), and is horizontally overlapped with data a block E (205). Not overlapped: if two data blocks contain no intersection for their vertical/horizontal projections, the two data blocks are vertically/horizontally not overlapped. As shown in FIG. 2d, the data block A (201) and the data block F (206) are vertically not overlapped.", column 3, line 45.).

It would have been obvious to one of ordinary skill in the art to disclose: defining the image function as a sum of data pixels in a certain direction; calculating the image function in a first direction to generate a first data set; calculating the image function in a second direction to generate a second data set; and searching for disparities in the image function in the first direction and the image function in the second direction as taught by Huaug "...for determining an adjacency relation...", Huaug, column 2, line 9.

Regarding **claim 22**, claim 6 recites identical features as in claim 22. Thus, arguments equivalent to those presented above for claim 6 is equally applicable to claim 22.

Regarding **claim 34**, claim 6 recites identical features as in claim 34. Thus, arguments equivalent to those presented above for claim 6 is equally applicable to claim 34.

21. **Claim 42** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination between NewSoft (NewSoft Presto! Bizcard User's Guide, NewSoft Technology Corp., 2001) and Zhou (US 6,898,316 B2), in further view of Pandipati (US 2002/0101626 A1).

Regarding **claim 42**, while the combination between NewSoft and Zhou disclose the method of claim 41, wherein:

first object comprises a business card (refer to references cited in claim 1) and

the first electronic form comprises a contact record of the software address book (refer to references cited in claim 1), but the combination does not teach wherein: the second object comprises a purchase receipt; and the second electronic form comprises an electronic financial record of a software financial application.

Pandipati teaches a bill scanner and financial organizer ("This invention relates to a scanner apparatus to scan bills into a computer and a software program which automatically organizes all the information that can be viewed in various formats, namely, tabular statements, pie-charts, etc and allows for record keeping, budgeting and reconciliation.", paragraph [0002]) wherein:

the second object comprises a purchase receipt ("The bills can be either grocery receipts, various purchase receipts, credit card bills, bank statements, etc.", paragraph [0016]); and

the second electronic form comprises an electronic financial record of a software financial application ("Briefly stated, it is an apparatus to scan bills with a unique software which automatically organizes all the information from the scanned bills.", paragraph [0016]).

It would have been obvious to one of ordinary skill in the art to disclose bill scanner and financial organizer wherein: the second object comprises a purchase receipt; and the second electronic form comprises an electronic financial record of a software financial application as taught by Pandipati that "organizes all the information that can be viewed in various formats, namely, tabular statements, pie-charts, etc and allows for record keeping, budgeting and reconciliation.", Pandipati, paragraph [0002].

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached on 7:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David P Rashid
Examiner
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BRIAN WERNER
SUPERVISORY PATENT EXAMINER